

CLAIMS

1. A light emitting device having formed therein a light emitting layer section based on a double heterostructure in which a
5 p-type cladding layer, an active layer and an n-type cladding layer, individually composed of a $Mg_aZn_{1-a}O$ ($0 \leq a \leq 1$) type oxide, are stacked in this order, the device using a face on the n-type cladding layer side as a light extraction surface, and having, as being provided on the main surface on the light extraction surface side of
10 the n-type cladding layer, an n-type low resistivity layer composed of a $Mg_aZn_{1-a}O$ ($0 \leq a \leq 1$) type oxide, and having a content of an n-type dopant larger than that in the n-type cladding layer.
2. The light emitting device as claimed in Claim 1, having a
15 metal bonding pad provided so as to cover a part of the main surface of the n-type low resistivity layer.
3. The light emitting device as claimed in Claim 1 or 2, wherein the n-type low resistivity layer has an effective carrier
20 concentration of $1 \times 10^{17}/cm^3$ to $1 \times 10^{20}/cm^3$, both ends inclusive.
4. The light emitting device as claimed in Claim 3, wherein the n-type low resistivity layer has an n-type dopant concentration of $1 \times 10^{17}/cm^3$ to $1 \times 10^{20}/cm^3$, both ends inclusive.

5. The light emitting device as claimed in any one of Claims
1 to 4, wherein the n-type low resistivity layer contains, as the
n-type dopant, one of, or two or more of B, Al, Ga and In.

5 6. The light emitting device as claimed in any one of Claims
1 to 5, wherein the n-type low resistivity layer is grown as a
Mg_aZn_{1-a}O-type oxide layer by MOVPE process, while incorporating
therein the n-type impurity in the growth step.

10 7. The light emitting device as claimed in any one of Claims
1 to 5, wherein the n-type low resistivity layer is obtained by
initially being grown in vapor phase in a form of a Mg_aZn_{1-a}O-type
oxide layer having an n-type dopant concentration lower than the
final n-type dopant concentration, and then by allowing the n-type
15 dopant to additionally diffuse therein from the main surface of the
layer.

8. The method of fabricating a light emitting device as
claimed in any one of Claims 1 to 7, wherein, in the process of
20 formation of the light emitting layer section having a double
heterostructure by growing, in vapor phase, the p-type cladding
layer, the active layer and the n-type cladding layer, individually
composed of a Mg_aZn_{1-a}O ($0 \leq a \leq 1$) type oxide, sequentially in this
order, the device after formation of the p-type cladding layer is
25 annealed in an oxidative gas atmosphere, and the active layer and

the n-type cladding layer are then grown in vapor phase.